

301

ABSTRACT OF THE DISCLOSURE

302

303 Electronic circuits couple energy storage devices, such as double layer capacitors or
304 rechargeable battery cells, to a power supply output, thereby improving noise suppression
305 and extending ride-through capability of the power supply. In a typical circuit, an energy
306 storage device is coupled in series with a switch that controls the charging current into
307 the energy storage device. The switch is controlled by a comparator that receives a signal
308 related to the voltage level of the power supply. In some embodiments, the comparator
309 also receives a feedback signal related to a charging current flowing into the energy
310 storage device. The circuit is configured so that the switch limits the charging current to
311 a predetermined current level, or does not allow the charging current to flow until the
312 output voltage of the power supply reaches a predetermined voltage level.